

REMARKS

The Applicants have amended the paragraph on Page 9 of the Specification which begins at Line 18. Claims 1-21 are pending. Claims 1, 3, 8-12, 14, and 18 have been amended. Claims 2, 4-7, 13, 15-17, and 19-21 remain unchanged. Reconsideration in light of the amendments and the following remarks is respectfully requested.

Claim Rejections - 35 U.S.C. §112

Examiner rejected Claims 1-13 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

With regard to claims 1-13, the Office Action states:

The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites that the liquid fraction should contain 20-100 grams of calcium per gram of pectin; this recitation is further found in the specification on page 9 (line 20). However none of the examples given in the specification meet that calcium requirement. Even if it is assumed that each ingredient making up the liquid fraction is 100% calcium (which would be an erroneous assumption), the liquid fraction of the examples given would either just barely meet the lower end of the calcium requirement range, or still fall short. The state of the prior art is such that calcium requirements with regard to low methoxyl pectin are commonly in the magnitude of milligrams of calcium per gram of pectin. The examiner therefore questions the claim of 20-100 "grams" of calcium, due to the conflict guidance found in the specification and the state of the art. One of ordinary skill in the art, given what is claimed, would not be able to produce a product commensurate with the working examples provided in the specification. The dependent claims are rejected for fully incorporating the deficiencies of the base claim. For examination purposes only, the claim will be treated as 20-100 "milligrams" of calcium per gram of pectin.

Applicants agree with Examiner's conclusion that the use of "grams" instead of "milligrams" in Claims 1 and at Page 9 (Line 20) of the specification was the result of a typographical error. Applicants have now amended the Specification, at Page 9, Line 20, to

delete the term "grams" and replace it with the word "milligrams." Applicants have also amended Claim 1 in the same manner.

In light of the above remarks and amendments, the rejection of Claims 1-13 is believed to be overcome. Applicants respectfully request Examiner to withdraw the rejection.

Claim Rejections - 35 U.S.C. §102

Examiner rejected Claims 1, 2, 3, 5, 8, 13, 14, 15, and 19 under 35 U.S.C. §102(b), as being anticipated by Moirano (US Patent No. 3,556,810). This rejection is respectfully traversed.

Moirano discloses a method for making an aqueous dessert gel consisting of the steps of: 1) mixing juice, pectin, and gum in one mixing step; 2) heating this mixture to 180-190°F; 3) adding calcium to the heated mixture; 4) adding fruit pieces to the heated mixture; 5) heating the mixture further to cook the fruit pieces up to a sterilizing temperature; and 6) cooling the mixture to gelatinization. (Col. 7, lns. 16-24). Examiner noted that Applicants' claim language of "comprising" was open-ended and, therefore, disclosed the Moirano individual method steps as instantly claimed. Examiner then comes to the startling, and unsupported, conclusion that "the order in which the steps are performed does not distinguish the claimed invention from the reference." When rejecting a method claim under 35 U.S.C. §102 by citation to a single piece of prior art disclosing an allegedly similar method, Examiner cannot simply dismiss the order of the steps involved as irrelevant to the rejection "when the method steps implicitly require that they be performed in the order written." *Interactive Gift Express, Inc. v. CompuServe, Inc.*, 256 F.3d 1323, 1342 (Fed. Cir. 2001). In this case, the method steps expressly require performance in a specific order, and Examiner cannot ignore this limitation. MPEP 2111.01 I. Examiner's argument is further unsupported in this regard by virtue of the fact that the reference cited does

not disclose the individual steps claimed, irregardless of the order in which the steps are performed. Specifically, Examiner claims that Moirano discloses "the steps of hydrating and low-methoxyl pectin in water, mixing a thickener with the pectin, ... , mixing calcium with the pectin and thickener, and adding a fruit component to the pectin, thickener, calcium composition" In fact, the Moriano reference nowhere discloses separate steps of hydrating low-methoxyl pectin in an aqueous solution with a separate mixing step of adding a thickener to the pectin solution. As noted previously, Moriano discloses "incorporating with the citrus juice all of the other components with the exception of the fruit sections and the calcium cyclamate and heating to a temperature of about 180-190°C [sic] until their solution in the juice was complete." (Col. 7, lns. 16-20). Thus, as originally drafted, Applicants claims were not anticipated by the Moriano reference.

In order to highlight the differences between Applicants' invention and the prior art cited by Examiner, Applicants have amended Claim 1 and Claim 14 to emphasize the sequential nature of Applicants' claimed invention. It should be clear from these amendments that Applicants' invention requires a separate hydrating step for the low-methoxyl pectin in an aqueous solution prior to addition to the liquid fraction. Claim 1 has also been amended to show a separate heating of this liquid fraction step prior to the mixing of the liquid fraction with the hydrated low-methoxyl pectin solution. Both Claims 1 and 14 have also been amended to reflect the requirement of Applicants' invention that the fruit component, after its addition to the mixture, is maintained at a temperature below which cooking of the fruit component will occur. Such limitation is clearly opposite to the teachings of the Moriano reference, which requires that the mixture is re-heated after adding the fruit sections "to sterilizing temperature." (Col. 7, lns. 23-24).

For the reasons stated above, Examiner should withdraw all rejections under 35 U.S.C. §102 with regard to the Moriano reference. Below, Applicants point out additional limitations specific to certain claims that are not disclosed by the Moriano reference.

With regard to Claim 2, the Moriano reference does not disclose a separate pectin solution maintained at a temperature of about 140°F to about 170°F.

With regard to Claim 3, the Moriano reference does not disclose a separate hydrated pectin solution in which a thickener is added.

With regard to Claim 5, Applicants are unable to respond to Examiner's claim that the Moriano reference "discloses utilizing ratios of thickener to pectin that fall within the instantly claimed range (see Col. 4, lns. 15-17)," as Examiner does not identify what specific components are considered "thickener." Elsewhere in the office action, Examiner indicates that locust bean gum is known as a thickener, yet the gelling agent ingredient list referred to by Examiner also lists as a component a "potassium-sensitive gum," and "calcium-sensitive carrageenan." To the extent that Examiner maintains that Claim 5 is rejected under the Moriano reference, Applicants request that Examiner more specifically identify what components or components Examiner considers to be thickeners so that Applicants can properly respond to this rejection.

With regard to Claim 8, the Moriano reference does not disclose a separate mixing step. Further, Claim 8 lists as a limitation that the mixing step continue "until the mixture formed therefrom obtains a homogenous gritty or grainy appearance." Examiner does not address this limitation with regard to the rejection of Claim 8. In the event that Examiner maintains the rejection of Claim 8 under Moriano, Applicants respectfully request that Examiner point to the portion of the reference that discloses this limitation. MPEP §2131.

With regard to Claim 14, Moriano does not disclose the mixing of an aqueous pectin solution with a liquid fraction "at a controlled rate of both mixing and addition of aqueous solution to the liquid fraction" In the event that Examiner maintains the rejection of Claim 14 under the Moriano reference, Applicants respectfully request that Examiner point to the specific location in the reference in which this limitation is disclosed. MPEP §2131.

With regard to Claim 19, Examiner has presented no evidence that the food sauce produced by the method of Claim 19 is disclosed by the Moriano reference. In fact, Moriano discloses a dessert gel with cooked fruit, therefore teaching away from Applicants' claimed sauce.

In light of the amendments made and the argument presented above, Applicants respectfully request that Examiner withdraw all rejections under 35 U.S.C. §102.

Claim Rejections - 35 U.S.C. §103

Examiner rejected Claims 4, 6, 7, 10, 11, and 16 under 35 U.S.C. §103(a), as being unpatentable over Morirano as applied to Claims 1, 2, 3, 5, 8, 13, 14, 15, and 19 above, and further in view of the combination of Braverman (US Patent No. 4,140,807) and NDSU Extension Service Publication (NDSU). This rejection is respectfully traversed.

As noted above, Moriano does not anticipate Claims 1, 2, 3, 5, 8, 13, 14, 15, and 19. Consequently, and for this reason alone, the Moriano reference cannot be used as providing these elements in support of a 35 U.S.C. §103 rejection in combination with other art. Thus, in light of the amendments and arguments discussed above in reference to the Moriano art, Examiner should withdraw the rejection of Claims 4, 6, 7, 10, 11, and 16 under 35 U.S.C. §103(a). In addition, Applicants note the following points with regard to the specific claims rejected.

With regard to Claim 4, Examiner asserts that, while the Moriano reference does not disclose the use of Xanthan gum as a thickener, it does disclose the use of locust bean gum. Examiner then makes the unsupported assertion that "Xanthan gum is a functional equivalent of locust bean gum as disclosed by Moriano and would have yielded functionally equivalent results." The MPEP admonishes that it is "not ... appropriate for the Examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known." MPEP §2144.03.a. In cases involving chemical theories, it has been held that, in order to establish a *prima facie* case of obviousness, the PTO "must provide evidentiary support for the existence and meaning of that theory." *In re Grose*, 592 F.2d 1161, 1167-68, 201 USPQ 57, 63 (CCPA 1979). The MPEP makes it clear that the "examiner must provide specific factual findings predicated on sound, technical and scientific reasoning to support his or her conclusion of common knowledge The applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the office action in which the common knowledge statement was made." MPEP §2144.03.b. In the event that Examiner maintains the rejection of Claim 4 under 35 U.S.C. §103(a), Applicants respectfully request that Examiner provide support for such assertions.

Further, Applicants would point out that the combination of art relied on by Examiner to support the 35 U.S.C. §103 rejection teaches the opposite proposition. Specifically, the Braverman art is directed toward a method for making a confection that does not use Xanthan gum. The Braverman reference is replete with citation to not employing Xanthan gum as a thickener. (See, e.g., Col. 4, ln. 50; Col. 6, ln. 58).

With regard to Claim 6, Examiner combines Braverman with Moriano to assert that it would have been obvious to use a juice concentrate as a fruit component in Applicants' claimed invention. As noted earlier, Moriano discloses making a dessert gel by the steps of: 1) mixing juice, pectin, and gum in one single step; 2) heating this mixture to 190°F; 3) adding calcium; 4) adding fruit pieces; 5) heating the entire mixture to a sterilizing temperature; and 6) cooling the mixture. (Col. 7, lns. 14-24). Braverman, on the other hand, teaches the formation of a "freezable-gel confection" by the steps of first adding a preservative and non-fat milk solids to water "under agitation before the stabilizer is introduced into the blending tank." The admixture is then heated to about 150°F "before adding sweetener, cocoa, or chocolate liquor (when used), any salt, flavoring, coloring, and fruit pulp or concentrate (when used) in, e.g., that order." Low-methoxyl pectin is an optional ingredient, but when used, calcium salt dissolved in hot water is added to the mixture after the low-methoxyl pectin. Next, all of the ingredients are brought to 175°F, and, finally, the pH of the composition is adjusted by adding a suitable acid. (Col. 8, lns. 48-68). It is not clear to Applicants what concoction would be the result of the combination of the disparate steps and ingredients of the Braverman and Moriano references, but it is clear that one would certainly not arrive at the limitations found in Claim 6 by following such steps. Since the proposed modification would render the prior art invention being modified unsatisfactory for its intended purposes, there is no suggestion or motivation to make the proposed modification. See, MPEP §2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

With regard to Claim 7, please see the discussion of Claim 6 above.

With regard to Claim 10, Examiner combines the NDSU reference with Moriano to support the rejection of the frozen fruit limitation of Claim 10. Firstly, Examiner incorrectly asserts that the NDSU reference teaches "the use of frozen fruits in jam and jelly compositions."

While that may be the title of the reference, what the reference actually discloses is that the frozen fruits must first be thawed (see fourth paragraph of reference). In other words, the NDSU reference does not teach adding a frozen fruit to a mixture, such as claimed by Claim 10, but merely indicates that a frozen fruit can be used as a starting ingredient if thawed prior to use. Secondly, even if the NDSU reference did teach the use of a frozen fruit in jam and jelly compositions, its combination with the Moriano reference would certainly not be obvious. Specifically, the Moriano reference, as Examiner notes when using Moriano to reject claims under §102, "discloses reheating after adding the fruit sections" In fact, Moriano requires heating the mixture to a sterilization temperature. Examiner does not explain why a reference that requires heating the fruit mixture to a sterilization temperature would suggest the use of a frozen fruit, thereby requiring further heating. Consequently, the combination of Moriano and the NDSU reference is inappropriate.

With regard to Claim 11, see the discussion of Claim 10 above.

With regard to Claim 16, see the discussion of Claim 10 above.

In light of the amendments made and the arguments asserted above, Applicants respectfully request that Examiner withdraw all rejections under 35 U.S.C. §103(a) with regard to the Moriano reference and further in view of the combination of Braverman and the NDSU Extension Service publication.

Examiner rejected Claims 1, 9, 10, 11, 14, 15, 16, 17, 20, and 21 under 35 U.S.C. §103(a), as being unpatentable over Uncooked Jam and Jellies by Pamela Brady in view of the combination of Jam Today! With Pomona's Universal Pectin online publication and Food Product Design article by Paula Frank. This rejection is respectfully traversed.

Examiner asserts that the Brady reference discloses all of the claim limitations with the exception of using a thickener, a low-methoxyl pectin, or calcium. Examiner is correct only in asserting that the Brady reference does not disclose these elements. However, it is important to note that the Brady reference specifically teaches the use of a high-methoxyl pectin. Any recipe calling for "pectin" as generally available to the consuming public refers to high-methoxyl pectin which uses sugar to set up the gelation of the jams and jellies. This is evident from the Brady reference which requires the addition of large amounts of sugar to every example disclosed. Consequently, not only does the Brady reference not disclose the use of low-methoxyl pectin, it teaches away from the use of low-methoxyl pectin. Low-methoxyl pectin and high-methoxyl pectin are simply not interchangeable elements, as each one requires opposite and competing mechanisms for the creation of a gel. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the reference are not sufficient to render the claims *prima facie* obvious. See, MPEP §2143.01; *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Aside from the fact that the Brady reference teaches the use of high-methoxyl pectin, the use of low-methoxyl pectin with the Brady recipe simply would not work. The following quotation from page 3 of Applicants' specification is illustrative of this fact:

As a consequence of low methoxyl pectins gelling reactivity with calcium, it is avoided in the prior art as a gelling agent for fruit suspensions. As noted by U.S. Patent No. 4,370,354, titled "Stabilized Fruit Suspensions and Method for Preparing the Same," issued to Leipold (the '354 Patent), the use "of low methoxyl pectin as the gelling agent is attended by certain difficulties resulting from the fact that it is calcium sensitive and in the presence of calcium tends to form stiffer gels than are desired. One difficulty is that all fruits contain calcium." (Col. 1, Ins. 27-31). As further noted in the '354 Patent, this difficulty can be overcome by adding an excess of calcium over the amount which can react with the pectin. This is done while the pectin is maintained at a high temperature such that the pectin fully reacts with the added calcium prior to the addition of the fruit

to be suspended. The final mixture is then further cooked and then slowly cooled in order to avoid the formation of any pre-gel.

Particular attention should be paid to the last sentence, which notes that the final mixture must be "further cooked and then slowly cooled in order to avoid the formation of any pre-gel." Examiner asserts that the purpose of the Brady reference is to disclose an uncooked jam and jelly recipe. Yet, to switch only the pectin ingredients with a low-methoxyl pectin would, at a minimum, require further cooking, thus negating this aspect of the disclosure. For all of the reasons stated above, it is inappropriate for Examiner to combine one reference which teaches a high-methoxyl pectin (which uses sugar as the gelation mechanism) with other references that require a low-methoxyl pectin (which uses the addition of calcium as the gelation mechanism). The references clearly teach in different directions and cannot be combined in this regard. See, MPEP §2141.02; MPEP §2143.01; *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983); *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Applicants would further point out that there is no evidence of record as to the date of publication of relevant portions of two of the references cited by Examiner in rejecting Claims 1, 9, 10, 11, 14, 15, 16, 17, 20, and 21 under 35 U.S.C. §103(a). The Brady reference appears to be a December 22, 2004 printout from the University of Arkansas website. Examiner provided a printout from the "Internet Archive Wayback Machine" which purports to show that this website page was last updated on April 24, 2003, a date which postdates Applicants' priority date of April 15, 2003. Likewise, a similar printout from the "Internet Archive Wayback Machine" shows that the website page from which the Jam Today article was printed was last updated on April 16, 2003. Thus, the Jam Today article was revised in some respect one day after the priority date for the application at issue. To the extent that Examiner continues to reject the

claims at issue under these two references, Applicants respectfully request that Examiner provide evidence that the pertinent portions of the references at issue actually pre-date Applicants' priority date and are thus truly prior art. MPEP §706.02(j).

In addition to all of the reasons cited above for the withdrawal of the rejections under 35 U.S.C. §103(a) regarding the Brady reference, the Jam Today reference, and the Frank reference, Applicants note the following specific to each rejected claim:

With regard to Claim 1, the references cited do not, either alone or in combination, teach the steps of: a) hydrating low-methoxyl pectin in an aqueous solution; b) heating a liquid fraction to at least 140°F, followed by c) a separate mixing step wherein the hydrated low-methoxyl pectin solution is mixed with the liquid fraction. Further, none of the references, either alone or in combination, teach that the liquid fraction comprises calcium in the range of 20-100 milligrams of calcium to gram of pectin. After combining three references, Examiner, having not found the limitation in any of these references, simply concludes that "it would have been obvious to one of ordinary skill in the art to utilize an amount of calcium within the instantly claimed range" Applicants respectfully request that Examiner support this statement with any evidence. MPEP §2144.03.

With regard to Claim 9, none of the references, either alone or in combination, disclose that the addition of the fruit reduces the temperature of the mixture to a point below which cooking of the fresh fruit would occur. While Examiner points to the Brady disclosure as suggesting this point by its title, none of the references specifically disclose this limitation.

With regard to Claim 10, none of the references, either alone or in combination, disclose adding frozen fruit to the mixture. Examiner asserts that "Brady disclosed that frozen fruit can be used and the use of blackberries (see page 1)." Unfortunately, Examiner again misconstrues

the reference in this regard. As is clearly instructed by the Brady reference, one must first "let the berries thaw." Consequently, the Brady reference does not teach using frozen fruit in the mixture, but, rather, simply discloses that the starting state of the ingredients can be frozen.

With regard to Claim 11, please see the discussion of Claim 10 above.

With regard to Claim 14, the references do not, either alone or in combination, disclose the steps of: a) hydrating low-methoxyl pectin in an aqueous solution, followed by b) mixing said aqueous solution with a liquid fraction at a controlled rate of both mixing and addition of aqueous solution to the liquid fraction, wherein said liquid fraction comprises calcium. To the extent that Examiner does not withdraw the rejection of Claim 14 on these grounds, Applicants respectfully request that Examiner specifically point to the teachings in these references of all of these elements, including the controlled rate of mixing and addition limitations. MPEP §2143.03. Further, the references do not disclose that the fruit pieces are maintained in the mixture below a temperature at which the cooking of said fruit pieces will occur.

With regard to Claim 16, see the discussion of Claim 10 above.

With regard to Claim 17, see the discussion of Claim 14 above.

With regard to Claim 20, the references do not, either alone or in combination, teach a product produced by the method steps of: a) hydrating a low-methoxyl pectin in aqueous solution; b) mixing the thickener with the aqueous pectin solution; and c) mixing said aqueous solution with a liquid fraction, wherein said liquid fraction comprises calcium. Further, the references do not teach that the fruit component is maintained in the mixture at a temperature below which cooking of the fruit component will occur.

With regard to Claim 21, see the discussion of Claim 20 above.

In light of the amendments made and the arguments detailed above, Applicants assert that the rejection of Claims 1, 9, 10, 11, 14, 15, 16, 17, 20, and 21 under the Brady disclosure, the Jam Today disclosure, and the Frank disclosure should be withdrawn.

Double Patenting

Examiner provisionally rejected Claims 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, and 21 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 of co-pending Application No. 10/417,473.

Applicants have filed an Express Abandonment with the USPTO in co-pending Application No. 10/417,473, a copy of which is attached hereto as Exhibit A. In light of the Express Abandonment of co-pending Application No. 10/417,473, the rejection of Claims 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, and 21 on this ground is overcome. Consequently, Applicants respectfully request Examiner to withdraw the double patenting rejection.

Aside from the double patenting rejection, Examiner cited no prior art against Claims 12 and 18. Consequently, Applicants assume that these claims are free of the prior art and allowable. Applicants bring to Examiner's attention minor amendments made to these claims for clarification purposes. These amendments are supported by the specification at page 15, lines 10-11, and do not change the scope or substance of what is claimed.

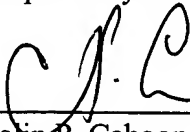
CONCLUSION

In light of the amendments and the arguments made by Applicants above, Applicants submit that all existing claims are now in condition for allowance. Applicants respectfully request that Examiner withdraw all rejections with regard to the above-referenced claims in reliance on one or more of the grounds submitted by Applicants.

If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact Colin P. Cahoon at 972-367-2001.

The Commissioner is hereby authorized to charge any payments that may be due or credit any overpayments to CARSTENS & CAHOON, L.L.P. Deposit Account 50-0392.

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